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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,250	10/02/2003	Kenichiro Uda	041094-5022	3462

9629 7590 01/27/2006

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EXAMINER
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POULOS, SANDRA K

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/676,250

**Applicant(s)**

UDA ET AL.

**Examiner**

Sandra K. Poulos

**Art Unit**

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/02/ 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because the abstract is more than one paragraph. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities:
  - a. Pages 6 (lines 4 and 9), 7 (third line from the bottom), 9 (seventh line from the bottom), recite "whose molecule have imide group" which is grammatically incorrect.
  - b. Example 1 in Tables 1 and 2 there is a misspelling of isobutylene as "isobytylene."

### *Claim Objections*

3. Claims 1 and 3 are objected to because of the following informalities:

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- a. Claim 1: The phrase "whose molecule have imide group" which is grammatically incorrect.
- b. Claim 3: The word "(co)polymer" is unclear because both the words "polymer" and "copolymer" are recited in the claim and it is not known if (co)polymer refers to a copolymer or polymer.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 4. Claim 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada (JP 2002-265974) where the abstract and JPO machine translation are referred to below.

Harada '974 discloses a water-soluble lubricant for warm or hot plastic working, which is excellent in lubricity and mold release properties, can control the deposition of a metal, and does not worsen the working environment and the operating efficiency (abstract; paragraph 3). The lubricant contains an anionic polymer compound having an average molecular weight of 500 to 1,000,000 and a nonionic polymer compound having an average molecular weight of 500 to 1,000,000, with the contents of the anionic polymer compound and the nonionic polymer compound respectively being 0.5-50 wt.% and 0.2-30 wt.% based on 100 wt.% of the lubricant (abstract; paragraph 5,

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16). Therefore, the content of the high polymer is 0.7-80 wt% based on 100 wt% of the lubricant (paragraph 19). The anionic polymer compound preferably comprise polymer having at least one of a sulfonic acid having double bonds, and a carboxyl group having double bonds (abstract; paragraphs 6-12). Maleic acid derivatives are among those used in the copolymer (paragraph 9). The lubricant can be used for easy mold release of a metallic material from tool metallurgy mold (paragraph 2). Imide groups are disclosed in paragraphs 9, 13. In the examples, a lubricant is prepared from an isobutylene/maleic anhydride copolymer having a mean molecular weight of 90,000 and an imidation ratio of 50% (paragraph 21). This example by Harada '974 appears to be identical to applicant's Example 1 in the current disclosure.

Therefore, Harada '974 anticipates the cited present claims.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Uda et al (JP 2003-206493) discloses water soluble lubricants containing a high molecular weight isobutylene-maleic acid copolymer imidized with ammonium.

O'Halloran (US 3,470,098) discloses high molecular weight nitrogen containing amide and imide derivatives of carboxylic acids and anhydrides that are used in lubricating oils.

Greenough (US 3,714,042) discloses an imidized high molecular weight carboxylic acid as a lubricating oil.

Doi (US 5,548,031) discloses imidation of a copolymer of maleic anhydride/isobutene that has an imidation ratio of 80-99 % and molecular weights up to 120,000.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 7:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP  
Sandra K. Poulos  
1/21/06

*Vasu Jagannathan*  
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